

APPLICANT: WILLIAMSON
SERIAL NO: 09/990,462
PAGE NO: 3

C. AMENDMENTS TO THE CLAIMS

1. (Currently Amended:) A resin system, comprising:

- (a) a water curable isocyanate functionalized prepolymer;
- (b) a first catalyst chemically bound-in to said prepolymer; and
- (c) a second catalyst soluble in water and insoluble in the prepolymer, wherein said second catalyst includes a hydrophilic coating.

2. (Original): A resin system according to claim 1, wherein said first catalyst is covalently bound-in to the prepolymer.

3. (Original): A resin system according to claim 1, wherein said first catalyst comprises a mixture of ionically and covalently bound-in catalysts.

4. (Original): A resin system according to claim 1, wherein said first catalyst comprises a tertiary amine catalyst.

5. (Original): A resin system according to claim 4, wherein the tertiary amine catalyst comprises a single chemical species.

6. (Original): A resin system according to claim 1, wherein said first catalyst comprises less than 10 percent and at least 0.1 percent by weight of the resin system.

APPLICANT: WILLIAMSON
SERIAL NO: 09/990,462
PAGE NO: 4

7. (Currently Amended): A resin system according to claim 4, wherein said tertiary amine catalyst is selected from the group consisting of:

- a
- (a) 1-(2-hydroxyethyl) pyrrolidine;
 - (b) 1-methyl piperazine;
 - (c) 1-methyl-2piperidine methanol;
 - (d) 1,4-bis(2-hydroxyethyl)-2-methylpiperazine;
 - (e) 2[2-(dimethylamino)ethyl] methyl amino ethanol;
 - (f) gramine;
 - (g) 3-morpholino-1,2-propanediol,
 - (h) 1,4-bis(3-aminopropyl) piperazine;
 - (i) tropine;
 - (j) 3-aminopropyl morpholine;
 - (k) 4,2-hydroxyethyl morpholine;
 - (l) 3,3-dlamino-N-methyl dipropylamine;
 - (m) 1,4-bis(2-hydroxypropyl)-2-methylpiperazine piperazine;
 - (n) 1-(2-hydroxypropyl)imidazole;
 - (o) 3-dimethyl amino propanol; and
 - (p) β -hydroxy-4-morpholine propane sulphonic acid.

8. (Original): A resin system according to claim 1, wherein said second catalyst comprises a solid Inorganic catalyst.

APPLICANT: WILLIAMSON

SERIAL NO: 09/990,462

PAGE NO: 5

9. (Canceled):

10. (Original): A resin system according to claim 1, wherein said second catalyst comprises less than 10 percent and at least 0.1 percent by weight of the resin system.

11. (Original): A resin system according to claim 1, wherein the first and second catalysts comprise less than 7.5 percent by weight of the resin system.

12. (Original): A resin system according to claim 1, wherein the first and second catalysts each comprise 2.5 percent by weight of the resin system.

13. (Original): A resin system according to claim 1, wherein said isocyanate functionalized prepolymer comprises an aliphatic isocyanate functionalized prepolymer.

14. (Currently Amended): An orthopaedic splinting material, comprising:

- (a) a flexible substrate; and
- (b) a resin system impregnated in or coated on said substrate and including:
 - (i) a water curable isocyanate functionalized prepolymer;
 - (ii) a first catalyst chemically bound-in to said prepolymer; and
 - (iii) a second catalyst soluble in water and insoluble in the prepolymer,
wherein said second catalyst includes a hydrophilic coating.

APPLICANT: WILLIAMSON
SERIAL NO: 09/990,462
PAGE NO: 6

15. (Original): An orthopaedic splinting material according to claim 14, wherein said resin system further comprises additives selected from the group consisting of fillers, pigments, fragrances, surfactants, lubricants, or mixtures thereof.

16. (Original): An orthopaedic splinting material according to claim 14, wherein said resin system comprises 30 to 80 percent by weight of said splinting material.

17. (Currently Amended): A method for treating an injury to a body part, comprising the steps of:

- (a) providing an orthopaedic splinting material, including
- (i) a flexible substrate; and
 - (ii) a moisture-curable resin system impregnated in or coated on said substrate and including a water curable isocyanate functionalized prepolymer, a first catalyst chemically bound-in to said prepolymer, and a second catalyst soluble in water and insoluble in the prepolymer, wherein said second catalyst includes a hydrophilic coating;
- (b) exposing the substrate to moisture in an amount sufficient to activate the moisture-curable resin on the substrate; and
- (c) positioning said splinting material around the body part to be treated and maintaining the splinting material in a preselected position relative to the body part for a sufficient period of time for the splinting material to harden,

APPLICANT: WILLIAMSON
SERIAL NO: 09/990,462
PAGE NO: 7

whereby the splinting material hardens into a rigid supporting structure custom-fitted to the body part to be treated.

18. (Currently Amended): A resin system, comprising a water curable, isocyanate functionalized prepolymer wherein the curing reaction is catalysed by a first chemically bound-in catalyst and a second not chemically bound-in catalyst:

- a!
- (a) said first catalyst comprising a tertiary amine catalyst selected from the group consisting of 1-(2-hydroxyethyl) pyrrolidine, 1-methyl piperazine, 1-methyl-2-piperidine methanol, 1,4-bis(2-hydroxyethyl) piperazine, 2[2-(dimethylamino)ethyl] methyl amino ethanol, gramine, 3-morpholino-1,2-propanediol, 1,4-bis(3-aminopropyl)piperazine, tropine, 3-aminopropyl morpholine, 4,2-hydroxyethyl morpholine, 3,3-diamino-N-methyl dipropylamine, 1,4-bis(2-hydroxypropyl)-2-methylpiperazine-methyl piperazine, 1-(2-hydroxypropyl)imidazole, 3-dimethyl amino propanol, and β -hydroxy-4-morpholine propane sulphonic acid;
- (b) said second catalyst is soluble in water and insoluble in said prepolymer; and
- (c) the first and second catalysts together show a synergistic effect whereby the reaction rate between water and the prepolymer is increased.

19. (Original): A resin system comprising at least a water curable, isocyanate functionalized prepolymer, wherein the curing reaction is catalysed by a first chemically

APPLICANT: WILLIAMSON
SERIAL NO: 09/990,462
PAGE NO: 8

bound-in catalyst and a second not chemically bound-in catalyst being coated with a hydrophilic coating.
